

CLAIMS

1. A peptide consisting of the same or substantially the same amino acid sequence as the amino acid sequence represented by SEQ ID NO: 1 or SEQ ID NO: 21, its amide or ester, or salts thereof, wherein a methionine residue at the N-terminus is optionally formylated.
- 5 2. The peptide consisting of the same or substantially the same amino acid sequence as the amino acid sequence represented by SEQ ID NO: 1 according to claim 1, its amide or ester, or salts thereof, wherein a methionine residue at the N-terminus is optionally formylated.
- 10 3. The peptide consisting of the same or substantially the same amino acid sequence as the amino acid sequence represented by SEQ ID NO: 1 or SEQ ID NO: 16 according to claim 1, its amide or ester, or salts thereof, wherein a methionine residue at the N-terminus is formylated.
- 15 4. The peptide consisting of the same or substantially the same amino acid sequence as the amino acid sequence represented by SEQ ID NO: 21 or SEQ ID NO: 22 according to claim 1, its amide or ester, or salts thereof, wherein a methionine residue at the N-terminus is formylated.
- 20 5. The peptide consisting of the same or substantially the same amino acid sequence as the amino acid sequence represented by SEQ ID NO: 21 or SEQ ID NO: 22 according to claim 1, its amide or ester, or salts thereof, wherein a methionine residue at the N-terminus is formylated and an isoleucine residue at the C-terminus is modified.
- 25 6. A peptide consisting of the same or substantially the same amino acid sequence as the amino acid sequence represented by SEQ ID NO: 17 or SEQ ID NO: 23, its amide or ester, or salts thereof, wherein a methionine residue at the N-terminus is optionally formylated.
7. The peptide consisting of the same or substantially the same amino acid sequence as the amino acid sequence represented by SEQ ID NO: 17 according to claim 6, its amide or ester, or salts thereof, wherein a methionine residue at the N-terminus is optionally formylated.

8. The peptide consisting of the same or substantially the same amino acid sequence as the amino acid sequence represented by SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19 or SEQ ID NO: 20 according to claim 6, its amide or ester, or salts thereof, wherein a methionine residue at the N-terminus is formylated.

5 9. The peptide consisting of the same or substantially the same amino acid sequence as the amino acid sequence represented by SEQ ID NO: 23 or SEQ ID NO: 24 according to claim 6, its amide or ester, or salts thereof, wherein a methionine residue at the N-terminus is formylated.

10 10. A medicament comprising the peptide, its amide or ester, or salts thereof, according to claim 1.

11. A medicament comprising the peptide, its amide or ester, or salts thereof, according to claim 6.

12. The medicament according to claim 10 or claim 11, which is a cell migration irritant.

13. The medicament according to claim 10 or claim 11, which is an anti-inflammatory agent.

15 14. The medicament according to claim 10 or claim 11, which is a prophylactic/therapeutic agent for asthma, allergosis, inflammation, inflammatory eye diseases, Assison's disease, autoimmune hemolytic anemia, systemic lupus erythematosus, psoriasis, rheumatism, brain hemorrhage, brain infarction, head injury, cord injury, brain edema, multiple sclerosis, Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis (ALS), encephalopathy associated with AIDS, cerebral meningitis, diabetes mellitus, arthritis rheumatoïdes, osteoarthritis, rheumatoid spondylitis, gouty arthritis, synovial inflammation, blood poisoning, Crohn's disease, ulcerative colitis, chronic pneumonia, pulmonary silicosis, pulmonary sarcoidosis, lung tuberculosis, cachexia, arterial sclerosis, Creutzfeldt-Jakob disease, viral infection, angina cordis, cardiac infarction, congestive failure, hepatitis, exaggerated immune response after medical transplantation, dialysis hypotension, diffuse intravascular coagulation syndrome, or immunodeficiency.

20 25 15. An antibody against the peptide, its amide or ester, or salts thereof, according to claim

- 1.
16. An antibody against the peptide, its amide or ester, or salts thereof, according to claim 6.
17. A diagnostic agent comprising the antibody according to claim 15.
- 5 18. A diagnostic agent comprising the antibody according to claim 16.
19. The diagnostic agent according to claim 17 or claim 18, which is a diagnostic agent for asthma, allergosis, inflammation, inflammatory eye diseases, Assison's disease, autoimmune hemolytic anemia, systemic lupus erythematosus, psoriasis, rheumatism, brain hemorrhage, brain infarction, head injury, cord injury, brain edema, multiple
- 10 sclerosis, Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis (ALS), encephalopathy associated with AIDS, cerebral meningitis, diabetes mellitus, arthritis rheumatoïdes, osteoarthritis, rheumatoid spondylitis, gouty arthritis, synovial inflammation, blood poisoning, Crohn's disease, ulcerative colitis, chronic pneumonia, pulmonary silicosis, pulmonary sarcoidosis, lung tuberculosis, cachexia, arterial sclerosis,
- 15 Creutzfeldt-Jakob disease, viral infection, angina cordis, cardiac infarction, congestive failure, hepatitis, exaggerated immune response after medical transplantation, dialysis hypotension, diffuse intravascular coagulation syndrome, or immunodeficiency.
20. A medicament comprising the antibody according to claim 15.
21. A medicament comprising the antibody according to claim 16.
- 20 22. The medicament according to claim 20 or claim 21, which is a cell migration depressant.
23. The medicament according to claim 20 or claim 21, which is a prophylactic/therapeutic agent for infectious disease.
24. A method for screening a compound or a salt thereof that alters a binding property or
- 25 a signal transduction between a G protein-coupled receptor protein or salts thereof, and the peptide according to claim 1, its amide or ester, or salts thereof, which comprises using (1) the receptor protein comprising the same or substantially the same amino acid sequence as the amino acid sequence represented by SEQ ID NO: 2, a partial peptide of the receptor protein or salts thereof, and (2) (i) the peptide according to claim 1, its amide

or ester, or salts thereof, or (ii) the compound or a salt thereof that alters a binding property between the receptor protein or a salt thereof, and the peptide according to claim 1, its amide or ester, or salts thereof.

25. A method for screening a compound or a salt thereof that alters a binding property or
5 a signal transduction between a G protein-coupled receptor protein or salts thereof, and
the peptide according to claim 6, its amide or ester, or salts thereof, which comprises
using (1) the receptor protein comprising the same or substantially the same amino acid
sequence as the amino acid sequence represented by SEQ ID NO: 2, a partial peptide of
the receptor protein or salts thereof, and (2) (i) the peptide according to claim 6, its amide
10 or ester, or salts thereof, or (ii) the compound or a salt thereof that alters a binding
property between the receptor protein or a salt thereof, and the peptide according to claim
6, its amide or ester, or salts thereof.

26. The screening method according to claim 24 or claim 25, wherein the G
protein-coupled receptor protein comprising the same or substantially the same amino
15 acid sequence as the amino acid sequence represented by SEQ ID NO: 2 is a G
protein-coupled receptor protein consisting of the amino acid sequence represented by
SEQ ID NO: 2, SEQ ID NO: 4 or SEQ ID NO: 6.

27. A kit for screening a compound or a salt thereof that alters a binding property or a
signal transduction between a G protein-coupled receptor protein or salts thereof, and the
20 peptide according to claim 1, its amide or ester, or salts thereof, which comprises using
(1) the receptor protein comprising the same or substantially the same amino acid
sequence as the amino acid sequence represented by SEQ ID NO: 2, a partial peptide of
the receptor protein or salts thereof, and (2) (i) the peptide according to claim 1, its amide
or ester, or salts thereof, or (ii) the compound or a salt thereof that alters a binding
25 property between the receptor protein or a salt thereof, and the peptide according to claim
1, its amide or ester, or salts thereof.

28. A kit for screening a compound or a salt thereof that alters a binding property or a
signal transduction between a G protein-coupled receptor protein or salts thereof, and the
peptide according to claim 6, its amide or ester, or salts thereof, which comprises using

(1) the receptor protein comprising the same or substantially the same amino acid sequence as the amino acid sequence represented by SEQ ID NO: 2, a partial peptide of the receptor protein or salts thereof, and (2) (i) the peptide according to claim 6, its amide or ester, or salts thereof, or (ii) the compound or a salt thereof that alters a binding property between the receptor protein or a salt thereof, and the peptide according to claim 6, its amide or ester, or salts thereof.

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29. A G protein-coupled receptor protein or its partial peptide, which comprises comprising the same or substantially the same amino acid sequence as the amino acid sequence represented by SEQ ID NO: 4, or salts thereof.

10 30. A G protein-coupled receptor protein consisting of the amino acid sequence represented by SEQ ID NO: 4, or a salt thereof.

31. A polynucleotide comprising a polynucleotide coding for the G protein-coupled receptor protein or its partial peptide according to claim 29.

32. A DNA consisting of a base sequence represented by SEQ ID NO: 5.

15 33. A recombinant vector comprising the polynucleotide according to claim 31.

34. A transformant, which is transformed by the recombinant vector according to claim 33.

35. A method for manufacturing the G protein-coupled receptor protein or a salt thereof according to claim 29, which comprises culturing the transformant according to claim 34,

20 and producing the G protein-coupled receptor protein according to claim 29.

36. An antibody against the G protein-coupled receptor protein, its partial peptide or salts thereof according to claim 29.

37. A polynucleotide comprising a base sequence or a portion thereof, which is complement to the polynucleotide according to claim 31.

25 38. A medicament comprising the G protein-coupled receptor protein, its partial peptide or salts thereof according to claim 29.

39. The medicament according to claim 38, which is a cell migration irritant.

40. The medicament according to claim 38, which is an anti-inflammatory agent.

41. The medicament according to claim 38, which is a prophylactic/therapeutic agent for

asthma, allergosis, inflammation, inflammatory eye diseases, Assison's disease, autoimmune hemolytic anemia, systemic lupus erythematosus, psoriasis, rheumatism, brain hemorrhage, brain infarction, head injury, cord injury, brain edema, multiple sclerosis, Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis (ALS),
5 encephalopathy associated with AIDS, cerebral meningitis, diabetes mellitus, arthritis rheumatoïdes, osteoarthritis, rheumatoid spondylitis, gouty arthritis, synovial inflammation, blood poisoning, Crohn's disease, ulcerative colitis, chronic pneumonia, pulmonary silicosis, pulmonary sarcoidosis, lung tuberculosis, cachexia, arterial sclerosis, Creutzfeldt-Jakob disease, viral infection, angina cordis, cardiac infarction, congestive
10 failure, hepatitis, exaggerated immune response after medical transplantation, dialysis hypotension, diffuse intravascular coagulation syndrome, or immunodeficiency.

42. A medicament comprising the polynucleotide according to claim 31.
43. The medicament according to claim 42, which is a cell migration irritant.
44. The medicament according to claim 42, which is an anti-inflammatory agent.
15 45. The medicament according to claim 42, which is a prophylactic/therapeutic agent for asthma, allergosis, inflammation, inflammatory eye diseases, Assison's disease, autoimmune hemolytic anemia, systemic lupus erythematosus, psoriasis, rheumatism, brain hemorrhage, brain infarction, head injury, cord injury, brain edema, multiple sclerosis, Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis (ALS),
20 encephalopathy associated with AIDS, cerebral meningitis, diabetes mellitus, arthritis rheumatoïdes, osteoarthritis, rheumatoid spondylitis, gouty arthritis, synovial inflammation, blood poisoning, Crohn's disease, ulcerative colitis, chronic pneumonia, pulmonary silicosis, pulmonary sarcoidosis, lung tuberculosis, cachexia, arterial sclerosis, Creutzfeldt-Jakob disease, viral infection, angina cordis, cardiac infarction, congestive
25 failure, hepatitis, exaggerated immune response after medical transplantation, dialysis hypotension, diffuse intravascular coagulation syndrome, or immunodeficiency.

46. A diagnostic agent comprising the polynucleotide according to claim 31.
47. The diagnostic agent according to claim 46 for asthma, allergosis, inflammation, inflammatory eye diseases, Assison's disease, autoimmune hemolytic anemia, systemic

lupus erythematosus, psoriasis, rheumatism, brain hemorrhage, brain infarction, head injury, cord injury, brain edema, multiple sclerosis, Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis (ALS), encephalopathy associated with AIDS, cerebral meningitis, diabetes mellitus, arthritis rheumatoidea, osteoarthritis, rheumatoid spondylitis, gouty arthritis, synovial inflammation, blood poisoning, Crohn's disease, ulcerative colitis, chronic pneumonia, pulmonary silicosis, pulmonary sarcoidosis, lung tuberculosis, cachexia, arterial sclerosis, Creutzfeldt-Jakob disease, viral infection, angina cordis, cardiac infarction, congestive failure, hepatitis, exaggerated immune response after medical transplantation, dialysis hypotension, diffuse intravascular coagulation syndrome, or immunodeficiency.

- 5 48. A medicament comprising the polynucleotide according to claim 37.
- 10 49. The medicament according to claim 48, which is a cell migration depressant.
- 15 50. The medicament according to claim 48, which is a prophylactic/therapeutic agent for infectious disease.
- 20 51. A diagnostic agent comprises the antibody according to claim 36.
- 25 52. The diagnostic agent according to claim 51, which is a diagnostic agent for asthma, allergosis, inflammation, inflammatory eye diseases, Assison's disease, autoimmune hemolytic anemia, systemic lupus erythematosus, psoriasis, rheumatism, brain hemorrhage, brain infarction, head injury, cord injury, brain edema, multiple sclerosis, Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis (ALS), encephalopathy associated with AIDS, cerebral meningitis, diabetes mellitus, arthritis rheumatoidea, osteoarthritis, rheumatoid spondylitis, gouty arthritis, synovial inflammation, blood poisoning, Crohn's disease, ulcerative colitis, chronic pneumonia, pulmonary silicosis, pulmonary sarcoidosis, lung tuberculosis, cachexia, arterial sclerosis, Creutzfeldt-Jakob disease, viral infection, angina cordis, cardiac infarction, congestive failure, hepatitis, exaggerated immune response after medical transplantation, dialysis hypotension, diffuse intravascular coagulation syndrome, or immunodeficiency.
- 30 53. A medicament comprising the antibody according to claim 36.
- 35 54. The medicament according to claim 53, which is a cell migration depressant.

55. The medicament according to claim 53, which is a prophylactic/therapeutic agent for infectious disease.

56. A method for screening a compound or a salt thereof that alters an expression level of the G protein-coupled receptor protein according to claim 29, which comprises using the 5 polynucleotide according to claim 31.

57. A kit for screening a compound or a salt thereof that alters an expression level of the G protein-coupled receptor protein according to claim 29, which comprises the polynucleotide according to claim 31.

58. A method for stimulating a cell migration, or a method for preventing/treating asthma, 10 allergosis, inflammation, inflammatory eye diseases, Assison's disease, autoimmune hemolytic anemia, systemic lupus erythematosus, psoriasis, rheumatism, brain hemorrhage, brain infarction, head injury, cord injury, brain edema, multiple sclerosis, Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis (ALS), encephalopathy associated with AIDS, cerebral meningitis, diabetes mellitus, arthritis 15 rheumatoïdes, osteoarthritis, rheumatoid spondylitis, gouty arthritis, synovial inflammation, blood poisoning, Crohn's disease, ulcerative colitis, chronic pneumonia, pulmonary silicosis, pulmonary sarcoidosis, lung tuberculosis, cachexia, arterial sclerosis, Creutzfeldt-Jakob disease, viral infection, angina cordis, cardiac infarction, congestive failure, hepatitis, exaggerated immune response after medical transplantation, dialysis 20 hypotension, diffuse intravascular coagulation syndrome, or immunodeficiency, which comprises administrating to a mammal an effective dose of (i) the peptide, its amide or ester, or salts thereof, according to claim 1, (ii) the peptide, its amide or ester, or salts thereof, according to claim 6, (iii) the G protein-coupled receptor protein, its partial peptide, or salts thereof, according to claim 29, or (iv) the polynucleotide according to 25 claim 31.

59. Use of (i) the peptide, its amide or ester, or salts thereof, according to claim 1, (ii) the peptide, its amide or ester, or salts thereof, according to claim 6, (iii) the G protein-coupled receptor protein, its partial peptide, or salts thereof, according to claim 29, or (iv) the polynucleotide according to claim 31, for manufacturing a cell migration

irritant or a prophylactic/therapeutic agent for asthma, allergosis, inflammation, inflammatory eye diseases, Assison's disease, autoimmune hemolytic anemia, systemic lupus erythematosus, psoriasis, rheumatism, brain hemorrhage, brain infarction, head injury, cord injury, brain edema, multiple sclerosis, Alzheimer's disease, Parkinson's 5 disease, amyotrophic lateral sclerosis (ALS), encephalopathy associated with AIDS, cerebral meningitis, diabetes mellitis, arthritis rheumatoïdes, osteoarthritis, rheumatoid spondylitis, gouty arthritis, synovial inflammation, blood poisoning, Crohn's disease, ulcerative colitis, chronic pneumonia, pulmonary silicosis, pulmonary sarcoidosis, lung 10 tuberculosis, cachexia, arterial sclerosis, Creutzfeldt-Jakob disease, viral infection, angina cordis, cardiac infarction, congestive failure, hepatitis, exaggerated immune response after medical transplantation, dialysis hypotension, diffuse intravascular coagulation 15 syndrome, or immunodeficiency.

60. A method for inhibiting a cell stimulation, or a method for preventing/treating infectious disease, which comprises administrating to a mammal an effective dose of (i) 15 the antibody according to claim 15, (ii) the antibody according to claim 16, (iii) the antibody according to claim 36, or (iv) the polynucleotide according to claim 37.

61. Use of (i) the antibody according to claim 15, (ii) the antibody according to claim 16, 15 (iii) the antibody according to claim 36, or (iv) the polynucleotide according to claim 37, for manufacturing a cell migration depressant or a prophylactic/therapeutic agent for 20 infectious disease.